



# UNITED STATES PATENT AND TRADEMARK OFFICE

*[Handwritten signature]*

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/050,519

01/18/2002

Hirohito Okuda

520.41089X00

7762

20457

7590

08/01/2006

ANTONELLI, TERRY, STOUT & KRAUS, LLP  
1300 NORTH SEVENTEENTH STREET  
SUITE 1800  
ARLINGTON, VA 22209-3873

EXAMINER

BALI, VIKKRAM

ART UNIT

PAPER NUMBER

2624

DATE MAILED: 08/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/050,519

Applicant(s)

OKUDA ET AL.

Examiner

Vikram Bali

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-5,7,10-14,16-18,20-33,35,37,39,40 and 43-48 is/are pending in the application.
- 4a) Of the above claim(s) 20,21,35,37,39,40,43,46 and 48 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7,10-14,16-18,22-33,44,45 and 47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/12/2006 has been entered. All amendments filed on 5/12/2006, to the claims have been entered.

2. Newly submitted claims 20-21, 43, 46, 35, 37, 39-40 and 48 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the claims are directed to an embodiment described as a second embodiment as shown in figures 5 and 22, which is related to a defect reviewing apparatus

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 20-21, 43, 46, 35, 37, 39-40 and 48 withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 16, 22, 44-45, and 47 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 16, 22, 44-45 and 47 claims "... is a fixed value or less, or ... fixed value or more" which is indefinite, because one can not have any thing less or more of fixed unless there is a constant or known value as a reference.

Claims 3-5, 7, 10-14, 17-18, and 23-33 are also rejected as they are dependent upon the independent claims 1, 16 and 22.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 3, 7 and 44 as best understood are rejected under 35 U.S.C. 103(a) as being unpatentable over by Samuels (US 6483937) in view of Harvey et al (US 6466895).

With respect to claim 1 as best understood, Samuels discloses the inspection system that divides the area into partial inspection areas, sets inspection conditions and inspecting the areas per the inspection conditions, (see figure 3, the first and second patterns as the areas and the design layout for the pattern areas and the inspection station for inspection of the patterns); the inspection area setting unit divides the area according the layout pattern, (see figure 3, and figure 4, numerical 150); as claimed. However, he fails to explicitly disclose the image acquiring system, and inspections condition setting unit sets the each inspection condition for each partial inspection area so that a false report rate is a fixed or less or a detection rate of a specified defect is a fixed or more, as claimed. Harvey teaches a wafer inspection system wherein an image acquiring system is used for the inspection system, (see col. 5, lines 7-9) as claimed. It would have been obvious to one ordinary skilled in the art at the time of invention to combine the two references as they are analogous because they are solving similar problem of wafer inspection. The optical inspection system as taught by Harvey can be incorporated in to the Samuels inspection system, because an optical inspection system is conventional and is extensively used in the wafer inspection system.

Samuel and Harvey fail to disclose the limitation of "inspections condition setting unit sets the each inspection condition for each partial inspection area so that a false report rate is a fixed or less or a detection rate of a specified defect is a fixed or more" as claimed. But, it is a design choice to have the settings as needed for the best yield of the system. And, therefore, one ordinary skilled in the art at the time of invention can simply have any threshold setting in order to get the best yield out of the inspection system.

With respect to claim 3, he further discloses dividing the areas into cell portion and non cell portions, (see figure 3, the first and the second pattern are active "cell" and inactive "non cell" portions) as claimed.

With respect to claim 7, Samuels further teaches the calculation of the range of each function (see figure 3 the first pattern and the second pattern these are read as the areas depending upon the layout pattern that have the wiring as the active section and the other as the non wiring as the non active patterns, or different criticality see col. 1, lines 13-17) as claimed.

Claim 44 as best understood is rejected for the same reasons as set forth in the rejection of claim 1, because claim 44 is claiming similar subject matter as claim 1.

4. Claims 4-5, 10-14 as best understood are rejected under 35 U.S.C. 103(a) as being unpatentable over Samuels (US 6483937) in view of Harvey et al (US 6466895) and further in view of Applicants Admitted Prior Art (herein after AAPA).

With respect to claim 4 Samuels and Harvey discloses the invention substantially as disclose and as describe above. However, they fail to disclose the display screen for overlaying at least the defect information, as claimed. AAPA describes the art in paragraph 0018, a display system for displaying the defect position, as claimed. It would have been obvious to one ordinary skilled in the art at the time of invention to simply combine the two references as they are analogous because they are solving the similar problem of electronic circuit inspection. The incorporation of the screen display into the Samuels and Harvey system is very obvious as the Samuels and Harvey system is done by the computer and it is a common knowledge in the art to have a display system in the computer system.

With respect to claims 5, AAPA teaches the division of the area to be inspected into defect output area and non output area, and cell portion and non cell portion, (see paragraph 0024 and paragraph 0007) as claimed.

With respect to claims 10-12, AAPA further teaches the editions of the partial inspection area, display screen with the inspection areas or the defects, (see paragraphs 0025, 0027 for the details) as claimed.

With respect to claims 13 and 14, AAPA further teaches the classifications of the defects according to the true or false report, (see paragraph 0023 and 0027) as claimed.

Claims 16-18, 45 and 22-33, 47 as best understood are rejected for the same reasons as set forth in the rejection of claims 1, 3-5, 7, 10-14 and 44, because claims 16-18, 45

and 22-33, 47 are claiming the similar subject matter in different combinations as claimed in claims 1, 3-5, 7, 10-14 and 44. Furthermore, with respect to claim 23 and 27, Samuels teaches the inspection areas are distributed by the wing density and different criticality, (see figure 3 the first pattern and the second pattern these are read as the areas depending upon the layout pattern that have the wing as the active section and the other as the non wing as the non active patterns, or different criticality see col. 1, lines 13-17) as claimed.

### ***Response to Arguments***

5. Applicant's arguments with respect to the independent claims 1, 16, 22 have been considered but are moot in view of the new ground(s) of rejection.

6. Applicant's arguments filed 5/12/2006 have been fully considered but they are not persuasive. Applicant argues that the "Background of the Invention" cannot be considered as the "admitted prior art". Examiner would like to point out that the section Background of the Invention starting paragraph [0003] calls for the conventional methods as use in the pattern inspections, and that's why the examine use the paragraphs as the admitted prior art because applicant does admit that the followings are the conventional methods.

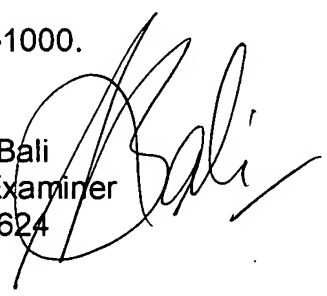


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vikkram Bali whose telephone number is 571.272.7415. The examiner can normally be reached on 7:00 AM - 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on 571.272.7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Vikkram Bali  
Primary Examiner  
Art Unit 2624



vb  
July 26, 2006